

WHAT IS CLAIMED IS:

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1. A service offering apparatus for offering services associated with objects, comprising:

authentication information acquisition request receiving means for receiving an acquisition request for
10 requesting an acquisition of authentication information used for establishing a session having a limited right with respect to said service offering apparatus and said objects;

authentication information transmitting means
15 for transmitting the authentication information; and

session start request receiving means for receiving a start request for requesting a start of the session containing the authentication information from a client different from an end to which the authentication
20 information is transmitted.

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2. The service offering apparatus as claimed
in claim 1, wherein the acquisition request of the
authentication request contains a list of object
identifiers for identifying said objects and a list of
5 service identifiers for identifying services associated
with said objects.

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3. The service offering apparatus as claimed
in claim 1, further comprising authentication
information producing means for producing the
authentication information in response to the
15 acquisition request of the authentication information.

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4. The service offering apparatus as claimed
in claim 1, further comprising authentication
information managing means for managing the
authentication information.

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5. The service offering apparatus as claimed
in claim 4, wherein said authentication information
managing means manages the authentication information by
relating with the list of the object identifiers for
5 identifying said objects and the list of the service
identifiers for identifying the services associated with
said objects.

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6. The service offering apparatus as claimed
in claim 1, further comprising session producing means
for producing the session in response to the start
15 request of the session.

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7. The service offering apparatus as claimed
in claim 1, further comprising session managing means
for managing the session.

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8. The service offering apparatus as claimed in claim 7, wherein said session managing means manages the session by relating with the authentication information.

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9. The service offering apparatus as claimed in claim 1, further comprising session identifier transmitting means for transmitting a session identifier for identifying the session to said client.

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10. The service offering apparatus as claimed in claim 1, further comprising use request receiving means for receiving a use request for requesting a use of a service associated with said objects from said client, the use request including a session identifier for identifying the session.

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11. The service offering apparatus as claimed
in claim 1, further comprising service offering means
for offering a service associated with said objects in
response to a use request for requesting a use of a
5 service associated with said objects from said client,
the use request including a session identifier for
identifying the session.

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12. The service offering apparatus as claimed
in claim 1, wherein the service associated with said
objects which is offered in the session is designated.

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13. A service offering method for offering
20 services associated with objects, comprising:

an authentication information acquisition
request receiving step of receiving an acquisition
request for requesting an acquisition of authentication
information used for establishing a session having a
25 limited right with respect to said service offering

apparatus and said objects;

an authentication information transmitting
step of transmitting the authentication information; and

a session start request receiving step of
5 receiving a start request for requesting a start of the
session containing the authentication information from a
client different from an end to which the authentication
information is transmitted.

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14. The service offering method as claimed in
claim 13, wherein the acquisition request of the
15 authentication request contains a list of object
identifiers for identifying said objects and a list of
service identifiers for identifying services associated
with said objects.

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15. The service offering method as claimed in
claim 13, further comprising an authentication
25 information producing step of producing the

authentication information in response to the
acquisition request of the authentication information.

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16. The service offering method as claimed in
claim 13, further comprising an authentication
information managing step of managing the authentication
10 information.

15 17. The service offering method as claimed in
claim 16, wherein said authentication information
managing step manages the authentication information by
relating with the list of the object identifiers for
identifying said objects and the list of the service
20 identifiers for identifying the services associated with
said objects.

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18. The service offering method as claimed in claim 13, further comprising a session producing step of producing the session in response to the start request of the session.

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19. The service offering method as claimed in claim 13, further comprising a session managing step of managing the session.

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20. The service offering method as claimed in claim 19, wherein said session managing step manages the session by relating with the authentication information.

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21. The service offering method as claimed in claim 13, further comprising a session identifier transmitting step of transmitting a session identifier

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for identifying the session to said client.

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22. The service offering method as claimed in claim 13, further comprising a use request receiving step of receiving a use request for requesting a use of a service associated with said objects from said client, 10 the use request including a session identifier for identifying the session.

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23. The service offering method as claimed in claim 13, further comprising a service offering step of offering a service associated with said objects in response to a use request for requesting a use of a 20 service associated with said objects from said client, the use request including a session identifier for identifying the session.

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24. The service offering method as claimed in claim 13, wherein the service associated with said objects which is offered in the session is designated.

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25. A processor readable medium storing a service offering program for causing a computer to
10 execute a service offering method for offering services associated with objects, the service offering method comprising:

an authentication information acquisition request receiving step of receiving an acquisition
15 request for requesting an acquisition of authentication information used for establishing a session having a limited right with respect to said service offering apparatus and said objects;

an authentication information transmitting
20 step of transmitting the authentication information; and

a session start request receiving step of receiving a start request for requesting a start of the session containing the authentication information from a client different from an end to which the authentication
25 information is transmitted.

26. The processor readable medium as claimed
in claim 25, wherein the acquisition request of the
authentication request contains a list of object
identifiers for identifying said objects and a list of
5 service identifiers for identifying services associated
with said objects.

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27. The processor readable medium as claimed
in claim 25, wherein the service offering method further
comprises an authentication information producing step
of producing the authentication information in response
15 to the acquisition request of the authentication
information.

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28. The processor readable medium as claimed
in claim 25, wherein the service offering method further
comprises an authentication information managing step of
managing the authentication information.

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29. The processor readable medium as claimed
in claim 28, wherein said authentication information
managing step manages the authentication information by
relating with the list of the object identifiers for
5 identifying said objects and the list of the service
identifiers for identifying the services associated with
said objects.

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30. The processor readable medium as claimed
in claim 25, wherein the service offering method further
comprises a session producing step of producing the
15 session in response to the start request of the session.

20 31. The processor readable medium as claimed
in claim 25, wherein the service offering method further
comprises a session managing step of managing the
session.

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32. The processor readable medium as claimed in claim 31, wherein said session managing step manages the session by relating with the authentication information.

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33. The processor readable medium as claimed in claim 25, wherein the service offering method further comprises a session identifier transmitting step of transmitting a session identifier for identifying the session to said client.

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34. The processor readable medium as claimed in claim 25, wherein the service offering method further comprises a use request receiving step of receiving a use request for requesting a use of a service associated with said objects from said client, the use request including a session identifier for identifying the session.

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35. The processor readable medium as claimed
in claim 25, wherein the service offering method further
comprises a service offering step of offering a service
associated with said objects in response to a use
5 request for requesting a use of a service associated
with said objects from said client, the use request
including a session identifier for identifying the
session.

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36. The processor readable medium as claimed
in claim 25, wherein the service associated with said
15 objects which is offered in the session is designated.

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37. A service offering program for causing a
computer to execute a service offering method for
offering services associated with objects, the service
offering method comprising:

an authentication information acquisition
25 request receiving step of receiving an acquisition

request for requesting an acquisition of authentication information used for establishing a session having a limited right with respect to said service offering apparatus and said objects;

5 an authentication information transmitting step of transmitting the authentication information; and

 a session start request receiving step of receiving a start request for requesting a start of the session containing the authentication information from a client different from an end to which the authentication information is transmitted.

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38. The service offering program as claimed in claim 37, wherein the acquisition request of the authentication request contains a list of object identifiers for identifying said objects and a list of service identifiers for identifying services associated with said objects.

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39. The service offering program as claimed
in claim 37, wherein the service offering method further
comprises an authentication information producing step
of producing the authentication information in response
5 to the acquisition request of the authentication
information.

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40. The service offering program as claimed
in claim 37, wherein the service offering method further
comprises an authentication information managing step of
managing the authentication information.

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41. The service offering program as claimed
20 in claim 40, wherein said authentication information
managing step manages the authentication information by
relating with the list of the object identifiers for
identifying said objects and the list of the service
identifiers for identifying the services associated with
25 said objects.

42. The service offering program as claimed
in claim 37, wherein the service offering method further
comprises a session producing step of producing the
session in response to the start request of the session.

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43. The service offering program as claimed
10 in claim 37, wherein the service offering method further
comprises a session managing step of managing the
session.

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44. The service offering program as claimed
in claim 43, wherein said session managing step manages
the session by relating with the authentication
20 information.

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45. The service offering program as claimed
in claim 37, wherein the service offering method further
comprises a session identifier transmitting step of
transmitting a session identifier for identifying the
5 session to said client.

10 46. The service offering program as claimed
in claim 37, wherein the service offering method further
comprises a use request receiving step of receiving a
use request for requesting a use of a service associated
with said objects from said client, the use request
15 including a session identifier for identifying the
session.

20 47. The service offering program as claimed
in claim 37, wherein the service offering method further
comprises a service offering step of offering a service
associated with said objects in response to a use
25 request for requesting a use of a service associated

with said objects from said client, the use request including a session identifier for identifying the session.

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48. The service offering program as claimed in claim 37, wherein the service associated with said
10 objects which is offered in the session is designated.

15 49. A service offering apparatus for offering services associated with objects, comprising:

session start request receiving means for receiving a start request for requesting a start of a session with the service offering apparatus;

20 session identifier transmitting means for transmitting a session identifier for identifying the session; and

use request receiving means for receiving a use request for requesting a use of a service associated
25 with said objects from a client different from an end to

which the session identifier is transmitted, the use request including information regarding the session identifier.

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50. The service offering apparatus as claimed in claim 49, further comprising session producing means
10 for producing the session in response to the start request of the session.

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51. The service offering apparatus as claimed in claim 49, further comprising session managing means
for managing the session.

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52. The service offering apparatus as claimed in claim 49, further comprising service offering means
25 for offering the service associated with said objects in

response to use request of the service associated with
said objects, the use request containing the information
regarding the session identifier.

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53. The service offering apparatus as claimed
in claim 49, wherein the information regarding the
10 session identifier includes the session identifier and
an object identifier for identifying said objects.

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54. The service offering apparatus as claimed
in claim 49, wherein the information regarding the
session identifier includes the session identifier and a
service identifier for identifying a service associated
20 with said objects.

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55. The service offering apparatus as claimed in claim 49, wherein the information regarding the session identifier is encrypted by a public key.

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56. The service offering apparatus as claimed in claim 49, further comprising public key providing means for providing a public key in response to an acquisition request for requesting an acquisition of the public key.

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57. The service offering apparatus as claimed in claim 49, wherein the information regarding the session identifier is encrypted by a common key common to the service offering apparatus.

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58. The service offering apparatus as claimed in claim 49, further comprising session identifier processing means for processing the session identifier.

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59. The service offering apparatus as claimed in claim 58, further comprising encrypting means for
10 encrypting the session identifier processed by said session identifier processing means.

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60. A service offering method for offering services associated with objects, comprising:

a step of receiving a start request for requesting a start of a session with the service
20 offering apparatus;
a step of transmitting a session identifier for identifying the session; and
a step of receiving a use request for requesting a use of a service associated with said
25 objects from a client different from an end to which the

session identifier is transmitted, the use request including information regarding the session identifier.

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61. The service offering method as claimed in claim 60, further comprising a step of producing the session in response to the start request of the session.

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62. The service offering method as claimed in claim 60, further comprising a step of managing the session.

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63. The service offering method as claimed in claim 60, further comprising a step of offering the service associated with said objects in response to use request of the service associated with said objects, the use request containing the information regarding the

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session identifier.

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64. The service offering method as claimed in claim 60, wherein the information regarding the session identifier includes the session identifier and an object identifier for identifying said objects.

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65. The service offering method as claimed in claim 60, wherein the information regarding the session identifier includes the session identifier and a service identifier for identifying a service associated with said objects.

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66. The service offering method as claimed in claim 60, wherein the information regarding the session identifier is encrypted by a public key.

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67. The service offering method as claimed in claim 60, further comprising a step of providing a public key in response to an acquisition request for requesting an acquisition of the public key.

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68. The service offering method as claimed in claim 60, wherein the information regarding the session identifier is encrypted by a common key common to the service offering apparatus.

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69. The service offering method as claimed in claim 60, further comprising a step of processing the session identifier.

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70. The service offering method as claimed in claim 69, further comprising a step of encrypting the

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session identifier processed by said session identifier processing means.

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71. A processor readable medium storing a service offering program for causing a computer to execute a service offering method for offering services associated with objects, the service offering method comprising:

a step of receiving a start request for requesting a start of a session with the service offering apparatus;

15 a step of transmitting a session identifier for identifying the session; and

a step of receiving a use request for requesting a use of a service associated with said objects from a client different from an end to which the session identifier is transmitted, the use request including information regarding the session identifier.

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72. The processor readable medium as claimed in claim 71, wherein the service offering method further comprises a step of producing the session in response to the start request of the session.

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73. The processor readable medium as claimed in claim 71, wherein the service offering method further comprises a step of managing the session.

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74. The processor readable medium as claimed in claim 71, wherein the service offering method further comprises a step of offering the service associated with said objects in response to use request of the service associated with said objects, the use request containing the information regarding the session identifier.

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75. The processor readable medium as claimed
in claim 71, wherein the information regarding the
session identifier includes the session identifier and
an object identifier for identifying said objects.

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76. The processor readable medium as claimed
10 in claim 71, wherein the information regarding the
session identifier includes the session identifier and a
service identifier for identifying a service associated
with said objects.

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77. The processor readable medium as claimed
in claim 71, wherein the information regarding the
20 session identifier is encrypted by a public key.

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78. The processor readable medium as claimed
in claim 71, the service offering method further
comprises a step of providing a public key in response
to an acquisition request for requesting an acquisition
5 of the public key.

10 79. The processor readable medium as claimed
in claim 71, wherein the information regarding the
session identifier is encrypted by a common key common
to the service offering apparatus.

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80. The processor readable medium as claimed
in claim 71, wherein the service offering method further
20 comprises a step of processing the session identifier.

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81. The processor readable medium as claimed in claim 80, wherein the service offering method further comprises a step of encrypting the session identifier processed by said session identifier processing means.

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82. A service offering program for causing a computer to execute a service offering method for offering services associated with objects, the service offering method comprising:

a step of receiving a start request for requesting a start of a session with the service offering apparatus;

a step of transmitting a session identifier for identifying the session; and

a step of receiving a use request for requesting a use of a service associated with said objects from a client different from an end to which the session identifier is transmitted, the use request including information regarding the session identifier.

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83. The service offering program as claimed in claim 82, wherein the service offering method further comprises a step of producing the session in response to the start request of the session.

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84. The service offering program as claimed in claim 82, wherein the service offering method further comprises a step of managing the session.

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85. The service offering program as claimed in claim 82, wherein the service offering method further comprises a step of offering the service associated with said objects in response to use request of the service associated with said objects, the use request containing the information regarding the session identifier.

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86. The service offering program as claimed in claim 82, wherein the information regarding the session identifier includes the session identifier and an object identifier for identifying said objects.

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87. The service offering program as claimed in claim 82, wherein the information regarding the session identifier includes the session identifier and a service identifier for identifying a service associated with said objects.

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88. The service offering program as claimed in claim 82, wherein the information regarding the session identifier is encrypted by a public key.

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89. The service offering program as claimed
in claim 82, the service offering method further
comprises a step of providing a public key in response
to an acquisition request for requesting an acquisition
5 of the public key.

10 90. The service offering program as claimed
in claim 82, wherein the information regarding the
session identifier is encrypted by a common key common
to the service offering apparatus.

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91. The service offering program as claimed
in claim 82, wherein the service offering method further
20 comprises a step of processing the session identifier.

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92. The service offering program as claimed
in claim 91, wherein the service offering method further
comprises a step of encrypting the session identifier
processed by said session identifier processing means.

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